UNITED STATES PATENT AND TRADEMARK OFFICE

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YANG, ANDREW GUS

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _25 April 2008_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-23_ is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-23_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _26 March 2004_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a) ☐ All　b) ☐ Some * c) ☐ None of:
　　　1. ☐ Certified copies of the priority documents have been received.
　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 14 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 14 is directed towards a computer program not embodied on a computer readable medium because the claim does not require the program product to be included in the program memory. Computer programs per se are non-statutory. See MPEP 2106.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smirnov et al. (U.S. Patent No. 6,570,578) in view of Oka (U.S. Patent No. 7,102,639).

With respect to claim 1, Smirnov et al. disclose a method for rendering a frame of animation in a computer system having a computer memory (personal computer 900, system memory 920, column 7, lines 6-8), the method comprising: retrieving scene descriptor data associated with the frame of animation (column 13, lines 49-54), wherein the scene descriptor data includes a first specification of at least one object (matte pass, column 11, lines 13-15), the first specification being associated with a first user-defined purpose for rendering the frame of animation (column 2, lines 20-23, column 9, lines 50-54), wherein the scene descriptor data includes a second

specification of the at least one object (beauty pass, column 11, lines 13-15), the second specification being associated with a second user-defined purpose for rendering the frame of animation (column 2, lines 18-20), and wherein the first and second specifications are independent of each other (full rendering of a selected object (beauty pass) and rendering of the outline of a selected object (matte pass) are independent of each other, as from defined in column 2, lines 18-23), receiving a selection of a first rendering option corresponding to the first user-defined purpose or a second rendering option corresponding to the second user-defined purpose (column 11, lines 17-18, column 12, lines 50-52, user-entry of rendering options). It is noted that Smirnov et al. do not explicitly teach querying a database to receive a first specification of an object. OFFICIAL NOTICE is taken that database queries are well known in the art; therefore it would have been obvious to query a database for a first representation of the one object in response to the first specification of the object when the selection is of the first rendering option because this would allow for obtaining necessary details for rendering the first representation of the object. However, Smirnov et al. do not expressly disclose loading the first representation of the object into the computer memory when the selection is of the first rendering option; rendering the object for the frame of animation using the first representation of the object when the selection is of the first rendering option; wherein the first representation of the object is not loading into the computer memory when the selection is of the second rendering option.

Oka, who also deals with rendering objects, discloses a method of loading a first representation into frame memory (column 12, lines 64-65). The GPU 18 in Fig. 1

conducts the rendering the object (based on the displaylist) for the frame of animation using the first representation of the object when the selection is of the first rendering option; wherein the first representation of the object is not loaded into the frame memory when the selection is of the second rendering option (column 12, lines 58-67). The first representation of the object is not loaded into the frame memory when the selection is of the second rendering option, or when object is lower than a given speed because the second representation is loaded into frame memory.

Smirnov et al. and Oka are in the same field of endeavor, namely rendering objects.

At the time of the invention, it would have been obvious to one skilled in the art to combine the method of loading the first representation into memory, rendering the object using the first representation, and not loading the first representation when the selection is of the second rendering option as taught by Oka because this would ensure rendering of only one specification of the object, the other specification being unused, and conserve memory by loading the needed specification of the object.

With respect to claim 2, Smirnov et al. disclose the method of claim 1. It is noted that Smirnov et al. do not explicitly teach querying a database to receive a first specification of an object. OFFICIAL NOTICE is taken that database queries are well known in the art; therefore it would have been obvious to query a database for a second representation of the one object in response to the second specification of the object when the selection is of the second rendering option because this would allow for obtaining necessary details for rendering the second representation of the object.

However, Smirnov et al. do not expressly disclose loading the second representation of the object into the computer memory when the selection is of the second rendering option; rendering the object for the frame of animation using the second representation of the object when the selection is of the second rendering option; wherein the second representation of the object is not loading into the computer memory when the selection is of the first rendering option.

Oka, who also deals with rendering objects, discloses a method of loading a second representation into frame memory (column 12, lines 64-65). The GPU 18 in Fig. 1 conducts the rendering the object (based on the displaylist) for the frame of animation using the second representation of the object when the selection is of the second rendering option; wherein the second representation of the object is not loaded into the frame memory when the selection is of the first rendering option (column 12, lines 58-67). The second representation of the object is not loaded into the frame memory when the selection is of the first rendering option, or when object is faster than a given speed because the first representation is loaded into frame memory.

Smirnov et al. and Oka are in the same field of endeavor, namely rendering objects.

At the time of the invention, it would have been obvious to one skilled in the art to combine the method of loading the second representation into memory, rendering the object using the second representation, and not loading the second representation when the selection is of the first rendering option as taught by Oka because this would

ensure rendering of only one specification of the object, the other specification being unused, and conserve memory by loading the needed specification of the object.

With respect to claim 3, Smirnov et al. disclose the method of claim 1 wherein the one object comprises a geometric object (object on which the pass is being performed, column 9, lines 50-54); and wherein the first representation of the object comprises a geometric description of the geometric object (column 9, lines 66-67, column 19, lines 1-3, lines 7-10).

With respect to claim 4, Smirnov et al. disclose the method of claim 1 wherein the one object comprises a camera object (column 9, lines 64-65); and wherein the first representation of the camera object comprises data selected from the group consisting of: camera field of view, camera position, camera orientation, camera aspect ratio (camera settings indicate camera position, column 9, lines 64-65).

With respect to claim 5, Smirnov et al. disclose the method of claim 1 wherein the one object comprises a light object (column 10, lines 4-6, lines 11-14); and wherein the first representation of the light object comprises data selected from the group consisting of: type of light source, light color, light source, light quality, light shape (source, column 10, lines 4-6).

With respect to claim 6, Smirnov et al. disclose the method as in claim 1. However, Smirnov et al. do not explicitly teach providing an asset management system for the first specification of the object and receiving a location of the first representation of the one object from the system. OFFICIAL NOTICE is taken that asset management systems are well known in the art for retrieving data; therefore it would have been

obvious to provide an asset management system for the first specification of the object

and receive a location of the first representation of the one object from the system

because this would allow for obtaining the first representation of the object from the

system.

With respect to claim 7, Smirnov et al. disclose the method of claim 1, further

comprising: storing the frame of animation (column 13, lines 49-50); and displaying the

frame of animation (column 13, lines 48-49).

With respect to claim 8, Smirnov et al. disclose a method for rendering a frame of

animation in a computer system having a computer memory, the method comprising:

retrieving scene descriptor data associated with the frame of animation (column 13,

lines 49-54), wherein the scene descriptor data specifies at least one object (object on

which the pass is being performed, column 9, lines 50-54), wherein the object is

associated with a reference to a first representation of the object (matte pass, column

11, lines 13-15), the first representation of the object being associated with a first user-

defined purpose for rendering the frame of animation (column 2, lines 20-23, column 9,

lines 50-54), wherein the object is associated with a reference to a second

representation of the object (beauty pass, column 11, lines 13-15), the second

representation of the object being associated with a second user-defined purpose for

rendering the frame of animation (column 2, lines 18-20), and wherein the first and

second specifications are independent of each other (full rendering of a selected object

and rendering of the outline of a selected object are independent of each other, as from

defined in column 2, lines 18-23), receiving a selection of a first rendering option

corresponding to the first user-defined purpose or a second rendering option

corresponding to the second user-defined purpose (column 11, lines 17-18, column 12,

lines 50-52, user-entry of rendering options), wherein the first representation of the

object comprises references to representations of a first plurality of objects (matte pass

comprises references to representations of a first plurality of objects, column 2, lines 20-

24). It is noted that Smirnov et al. do not explicitly teach querying a database to receive

a first specification of an object. OFFICIAL NOTICE is taken that database queries are

well known in the art; therefore it would have been obvious to query a database for a

first representation of the one object in response to the first specification of the object

when the selection is of the first rendering option because this would allow for obtaining

necessary details for rendering the first representation of the object. However, Smirnov

et al. do not expressly disclose loading the first representation of the object into the

computer memory when the selection is of the first rendering option; rendering the

object for the frame of animation using the first representation of the object when the

selection is of the first rendering option; wherein the first representation of the object is

not loading into the computer memory when the selection is of the second rendering

option.

Oka, who also deals with rendering objects, discloses a method of loading a first

representation into frame memory (column 12, lines 64-65). The GPU 18 in Fig. 1

conducts the rendering the object (based on the displaylist) for the frame of animation

using the first representation of the object when the selection is of the first rendering

option; wherein the first representation of the object is not loaded into the frame memory

when the selection is of the second rendering option (column 12, lines 58-67). The first representation of the object is not loaded into the frame memory when the selection is of the second rendering option, or when object is lower than a given speed because the second representation is loaded into frame memory.

Smirnov et al. and Oka are in the same field of endeavor, namely rendering objects.

At the time of the invention, it would have been obvious to one skilled in the art to combine the method of loading the first representation into memory, rendering the object using the first representation, and not loading the first representation when the selection is of the second rendering option as taught by Oka because this would ensure rendering or only one specification of the object.

With respect to claim 9, Smirnov et al. disclose the method of claim 8, wherein loading the first representation of the object into the computer memory when the selection is of the first rendering option comprises loading representations of the first plurality of objects into the computer memory when the selection is of the first rendering option (matte pass comprises references to representations of a first plurality of objects, column 2, lines 20-24).

With respect to claim 10, Smirnov et al. disclose the method as in claim 9 comprising identical steps of claim 2; see rationale for rejection of claim 2.

With respect to claim 11, Smirnov et al. disclose the method as in claim 9 identical to claim 3; see rationale for rejection of claim 3.

With respect to claim 12, Smirnov et al. disclose the method of claim 9 as in claim 4; see rationale for rejection of claim 4.

With respect to claim 13, Smirnov et al. disclose the method of claim 9 as in claim 5; see rationale for rejection of claim 5.

With respect to claim 14, Smirnov et al. disclose a computer program product for a computer system including a processor and a program memory (column 7, lines 30-34), the computer product comprising code that directs the processor to execute the method of claims 1-2; see rationale for rejection of claims 1-2. The codes reside on tangible media (column 7, lines 30-32).

With respect to claim 15, Smirnov et al. disclose the computer program product as in claim 14 that implements the method of claim 9; see rationale for rejection of claim 9.

With respect to claim 16, Smirnov et al. disclose the computer program product as in claim 15 that implements loading and rendering steps of claim 2; see rationale for rejection of claim 2.

With respect to claim 17, Smirnov et al. disclose the computer program product as in claim 16 that implements the method of claim 3; see rationale for rejection of claim 3.

With respect to claim 18, Smirnov et al. disclose the computer program product of claim 16 that implements the method of claim 4; see rationale for rejection of claim 4.

With respect to claim 19, Smirnov et al. disclose the computer program product of claim 16 that implements the method of claim 5; see rationale for rejection of claim 5.

With respect to claim 20, Smirnov et al. disclose the computer program product as in claim 16, wherein the first representation of the object further comprises values for properties of objects in the first plurality of objects (column 9, lines 55-67, column 10, lines 1-14).

With respect to claim 21, Smirnov et al. disclose the method of claim 3, wherein the geometric description of the geometric object includes a plurality of geometric parameters (column 9, lines 66-67, column 19, lines 1-3, lines 7-10); and wherein the scene descriptor data includes values for the plurality of geometric parameters (as defined by the pass definition, column 9, lines 50-55).

With respect to claim 22, Smirnov et al. disclose the method of claim 4, wherein the first representation of the camera object includes a plurality of camera parameters (column 9, lines 64-65); and wherein the scene descriptor data includes values for the plurality of camera parameters (as defined by the pass definition, column 9, lines 50-55).

With respect to claim 23, Smirnov et al. disclose the method of claim 5, wherein the first representation of the light object includes a plurality of light parameters (column 10, lines 4-6, lines 11-14); and wherein the scene descriptor data includes values for the plurality of light parameters (as defined by the pass definition, column 9, lines 50-55).

Response to Arguments

Applicant's arguments with respect to claims 1, 8, and 14 have been considered but are moot in view of the new ground(s) of rejection. Smirnov et al. teaches two specifications independent of each other.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,232,974 to Horvitz et al. for a method of rendering a sprite from a scene description in low resolution and high resolution.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW YANG whose telephone number is (571)272-5514. The examiner can normally be reached on 8:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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AGY

7/17/08